

PROGRAM LOADING MECHANISM
THROUGH A SINGLE INPUT DATA PATH

Abstract of the Disclosure

Pieces of input data, which can be either
5 setup data or program data with an associated
identifier, are provided to a processing engine through
a single input data path. After a system initially
resets, the processing engine runs in setup mode. When
an identifier for setup data is detected, input data is
10 passed unchanged through an execution pipeline to
control logic, which executes a setup program. The
setup program loads a program counter, a memory, a
register file counter, and a register file. When an
identifier for program data is detected, the processing
15 engine automatically switches to run mode and input
data is processed in the execution pipeline. The
processing engine automatically switches between run
mode and setup mode depending on the identifier. Using
a single input data path decreases hardware complexity
20 and allows input data to be processed without external
control logic.

REF ID: A65450